

## Emerging Risk to Animal Health Notice

### African Swine Fever

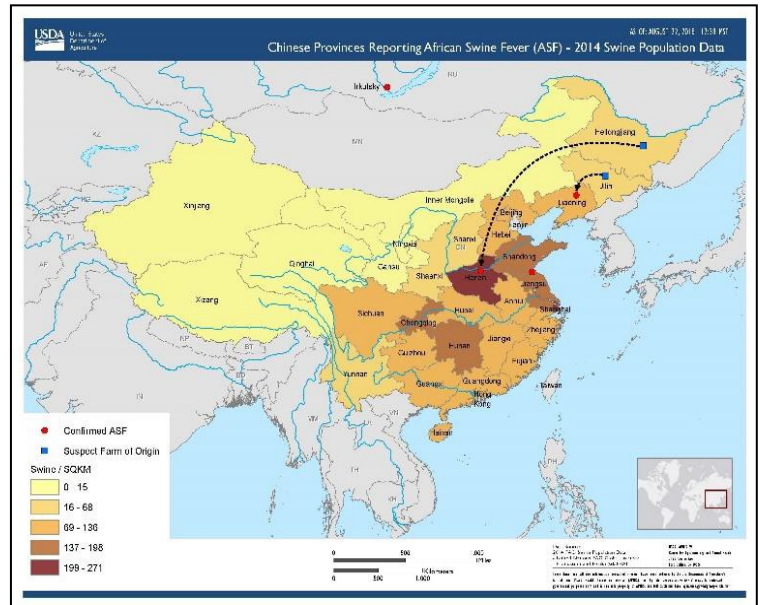
#### China

August 2018

#### Key Points

##### China situation

- On August 3, 2018, China reported to the World Organization for Animal Health (OIE) their first ASF outbreak on a domestic swine farm in Shenyang, Liaoning Province with an onset date of August 1.<sup>1a</sup> [Map A]. Liaoning is one of China's biggest pig hubs. One third of Liaoning live pigs are shipped outside the province to supply other regions of the country.<sup>2</sup> This swine farm in Shenyang, China is located over 621 miles (1,000 km) south and east from the furthest eastern ASF reported outbreak on the Euro-Asian continent; an ASF outbreak that occurred in March 18, 2017 on a swine farm in the Irkutskaya Oblast, Russia, just north of the central northern border of Mongolia.<sup>3</sup> [Map A] The Shenyang ASF-affected farm received pigs purchased from Jilin City in Jilin province (just north of Liaoning province) in March 2018 and began to demonstrate signs of ASF in April 2018. [Map A]
- As of August 21, 2018, China has since confirmed two more ASF outbreak locations in north-eastern and central-eastern provinces of China.<sup>1b</sup> The second outbreak began on August 14 in Zhengzhou, Henan province, in a slaughter facility. The affected pigs had been shipped from, Jiamusi city in Heilongjiang province, located north of Jilin province, and bordering Russia [Map A]. The third outbreak began on August 15, on a domestic swine farm in Lianyungang city, Jiangsu province.<sup>1c</sup> Both the second and third outbreaks are around 700 miles (km) and 500 miles (805 km), respectively, from the first outbreak and over 270 miles (434 km) from each other. [Map A]
- China has been an important trading partner with Russia. In accordance with a liberal trade policy in China, the increasing demand for pork has resulted in a great increase in the volume of live pigs and pork products imported to China. Illegal products imported and waste improperly disposed from international ports and airports to feed pigs are difficult to mitigate. With this outbreak in China, to avoid economic losses, farmers illegally send sick pigs to local markets, possibly resulting in the rapid spread of ASF to other local farms.<sup>4</sup>
- The swine farms located in the eastern third of China produce over half of the global population of domestic pigs (estimated at 433 million pigs out of a global total of 769.05 million),<sup>5</sup> with swine densities per sqkm ranging from approximately 30 pigs/sqkm in Heilongjiang province to over 260 pigs/sqkm and 270



Map A. Chinese provinces reporting ASF and suspected farms of origin

pigs/sqkm in Henan province and Shanghai province, respectively.<sup>6</sup> [Map A]

- Genomic sequencing identified the China ASF virus strain ASFV-SY18 belongs to genotype II group and shares 100% nucleotide identity with the following ASF strains: Georgia 2007/1, Krasnodar 2012, Irkutsk 2017 and Estonia 2014, based on p72 gene.<sup>4</sup>

#### Information about ASF

- African Swine Fever (ASF) is a foreign animal disease that has NOT been detected in domestic or wild swine in the United States.
- ASF is a highly contagious hemorrhagic disease of all pigs, including domestic pigs, warthogs, European wild boar and American wild pigs. All age groups are equally susceptible.
- ASF is not a threat to human health.
- ASF is a notifiable disease in the United States. Suspected cases should be reported to State and Federal Animal Health officials, who will initiate a Foreign Animal Disease investigation.
- APHIS animal health regulations prohibit the importation of live pigs and untreated products derived from pigs, including meat, from countries or regions that are affected with ASF.
- Strict biosecurity measures are essential to prevent introduction and spread of the virus.
- There are no treatments or vaccines available; and prevention, control and eradication of the disease are mainly based on the implementation of strict and complex sanitary measures.

- The USDA APHIS FAD PReP Disease Response Strategy “African Swine Fever” is available.<sup>7</sup> With high virulence forms of the virus, ASF is characterized by high fever, loss of appetite, hemorrhages in the skin and internal organs, and death in 2-10 days on average. Mortality rates may be as high as 100%. The incubation period is 5 to 21 days after direct contact with infected pigs, but can be less than five days after exposure to an infective tick.<sup>7,8,9,10</sup>
- The virus is found in all body fluids and tissues of infected domestic pigs. Pigs usually become infected by direct contact with infected pigs or by ingestion of garbage containing unprocessed infected pig meat or pig meat products. Not all processing procedures inactivate the virus; unprocessed meat must be heated to at least 70 degrees C for 30 minutes and 30 minutes at 60 degrees C is sufficient for serum and body fluids.<sup>10</sup> Biting flies and ticks, contaminated premises, vehicles, equipment or clothing can also spread the virus to susceptible animals. Sodium hypochlorite, citric acid (1%) and some iodine and quaternary ammonium compounds are reported to destroy ASFV on some nonporous surfaces. In one recent experiment, either 2% citric acid or higher concentrations of sodium hypochlorite (e.g., 2000 ppm) could disinfect the virus on wood; however, citric acid was more effective.<sup>10</sup>
- The wild boar can serve as a natural reservoir of the virus and spread the virus by direct contact. ASF in Africa is maintained by warthogs, without sign of disease. Spread from this reservoir is via the soft tick *Ornithodoros moubata*. The tick will ingest the virus when taking a blood meal from an infected animal and then pass it on when feeding on susceptible animals. If there is a competent tick vector in China, host-vector-environment cycle could develop.<sup>7</sup>
- The Global African Swine Fever Research Alliance (GARA) was established to maximize knowledge, abilities and resources of international partners, guided by the USDA Agricultural Research Service (ARS), to generate scientific knowledge and tools to contribute to the successful prevention, control and, where feasible, eradication of ASF.<sup>11</sup>

## Sources

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